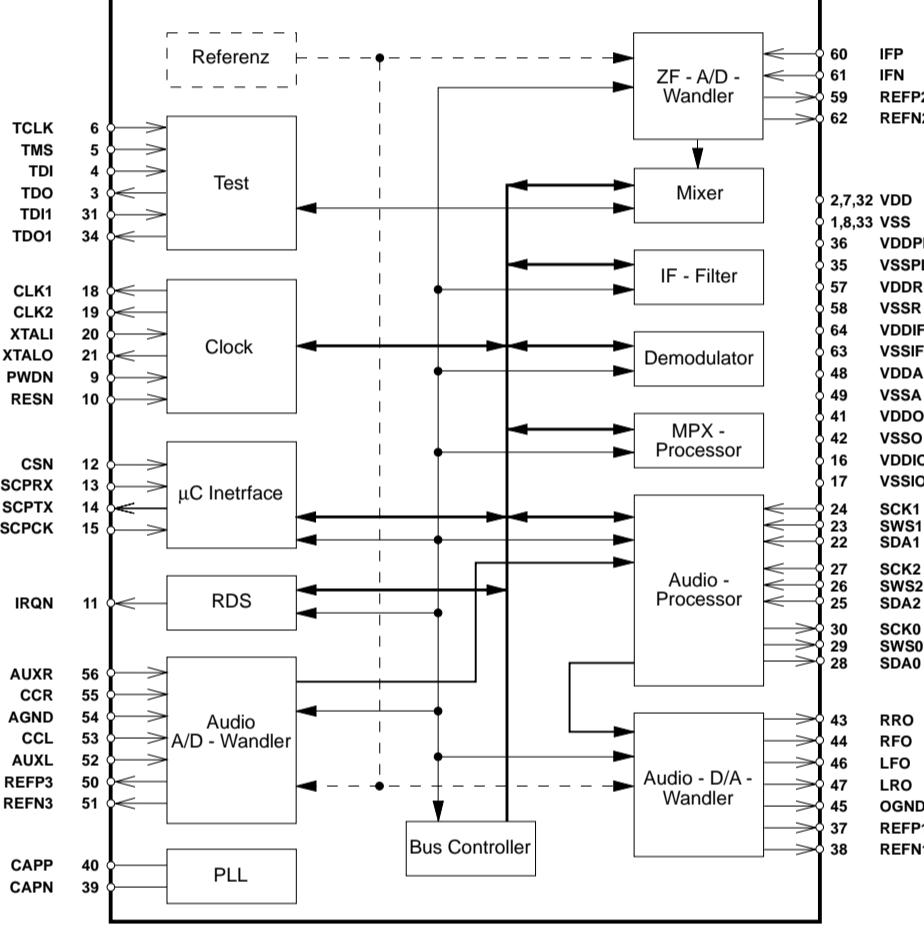
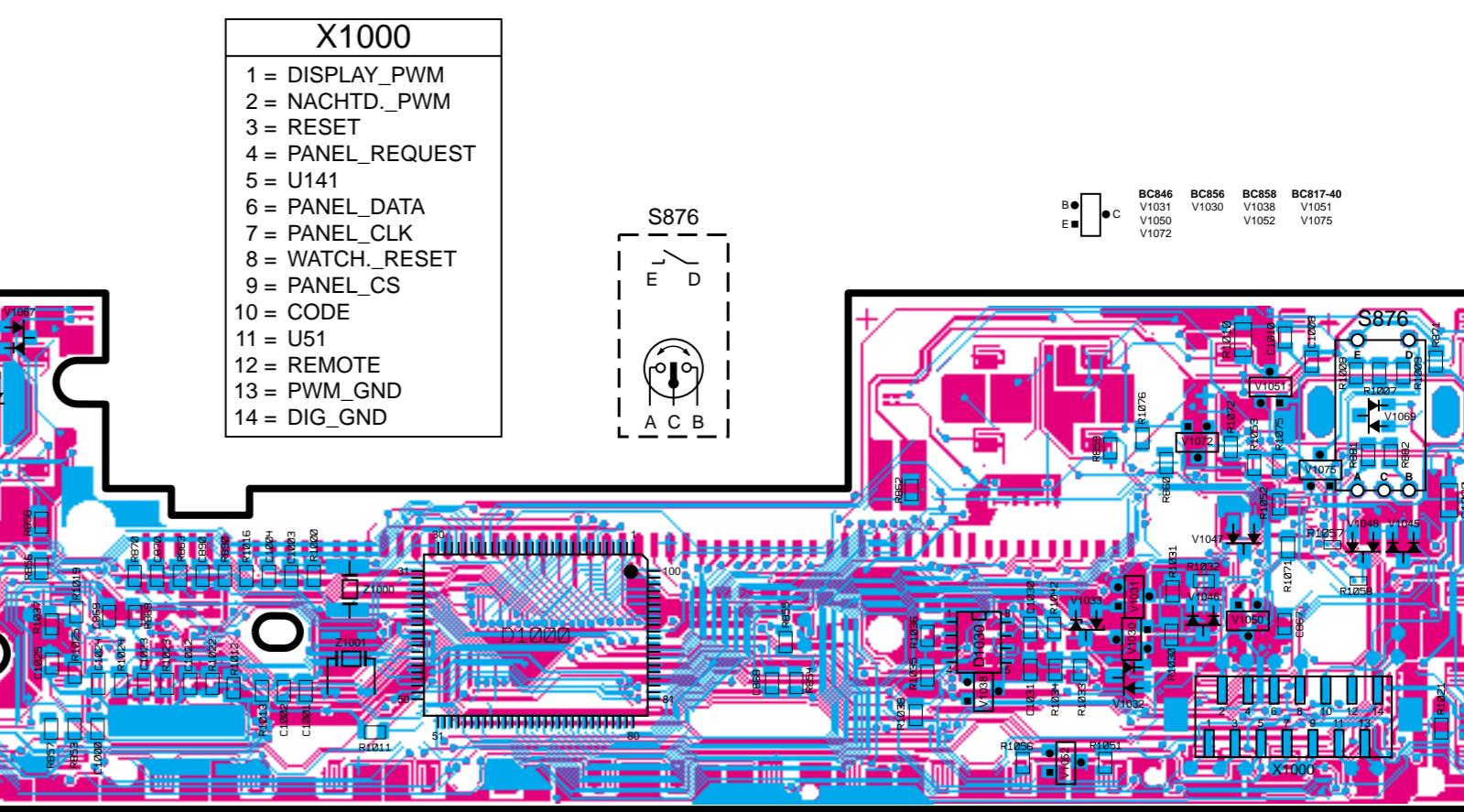
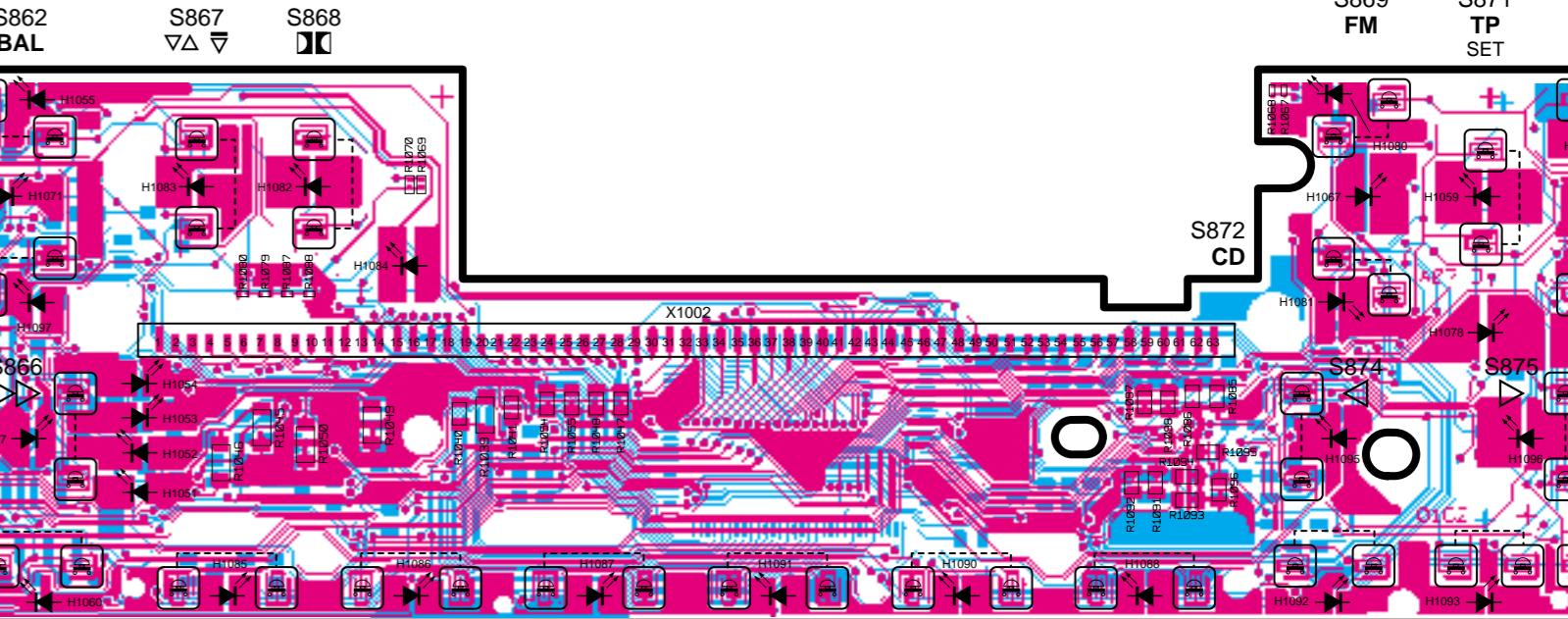
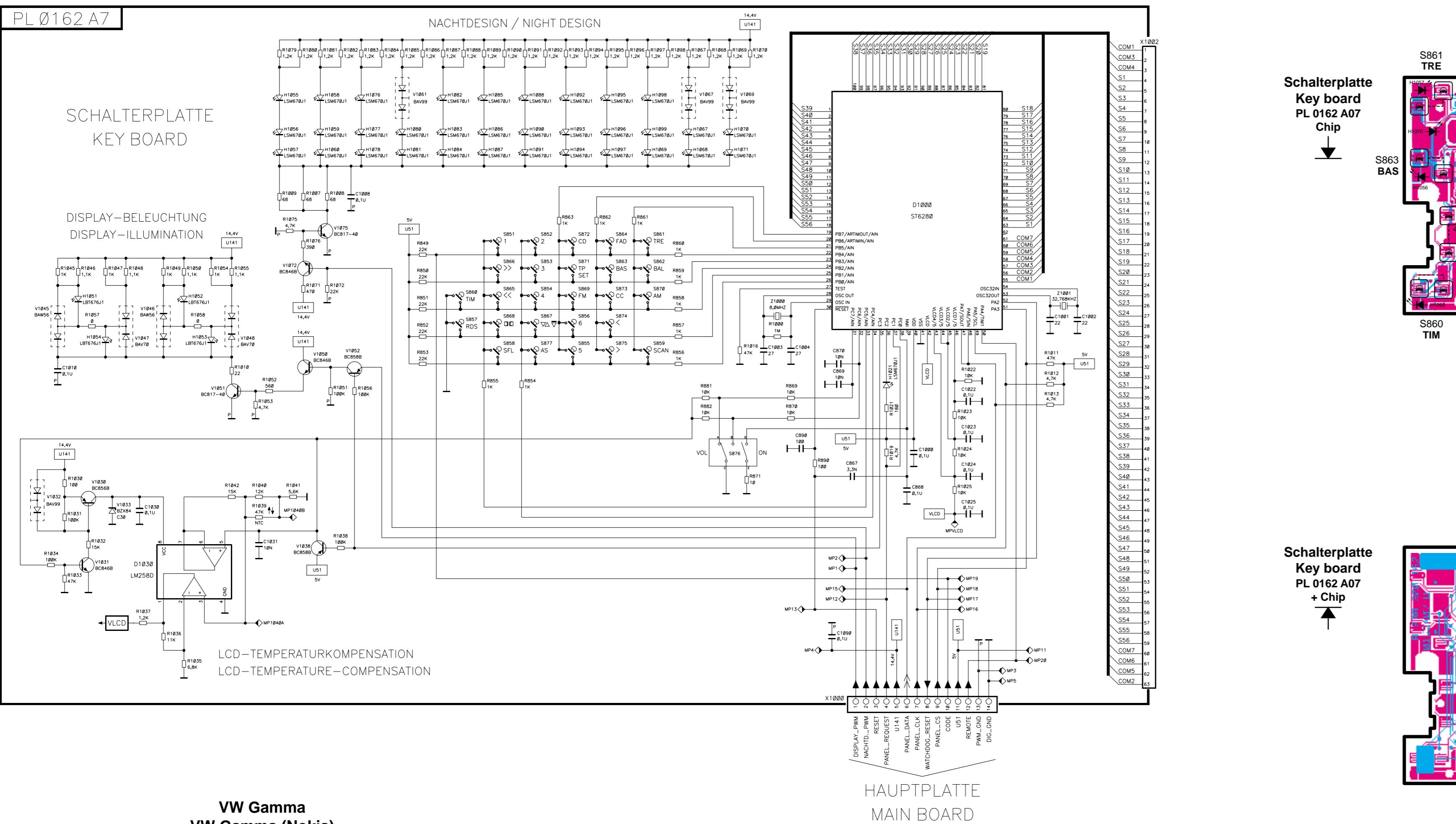


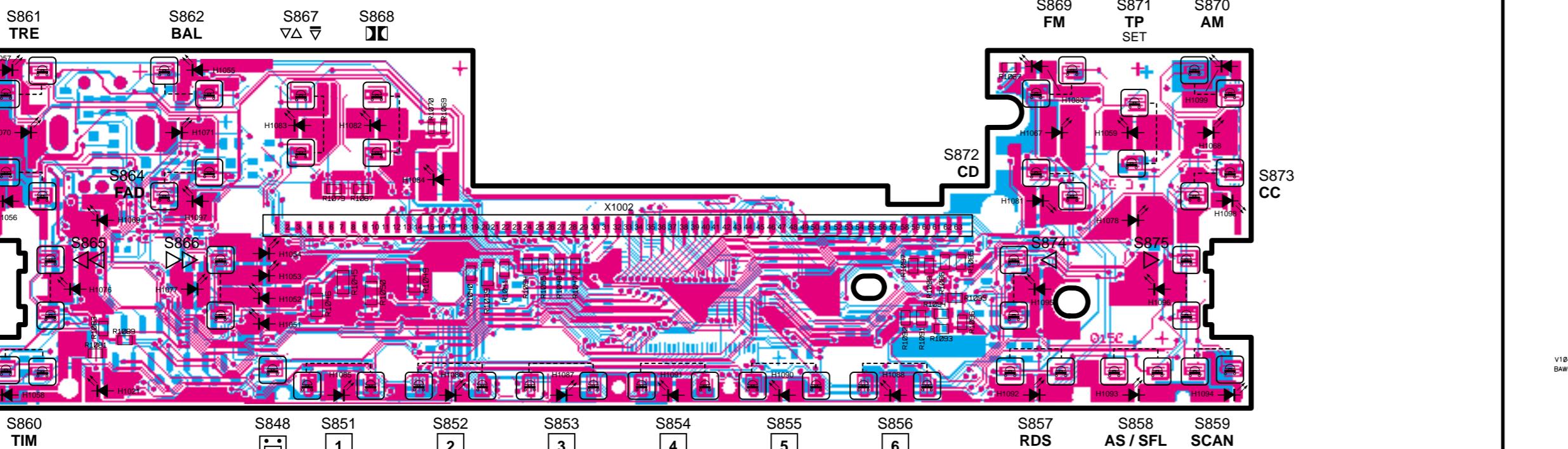
Pin-Belegung des IC D150 Digital IC D150 Pin Configuration			
Pin No.	I/O	Name	Function
1	-	VSS	Ground
2	I	VDD	5 V
4	-	TDI	Test Mode
5	I	TMS	Testmode
6	-	TDX	Testclock
7	-	TDI	5 V
8	I	VSS	Power down Zustand
9	I	PWON	Reset
10	I	RESN	Hardware reset (active LOW)
11	O	IRGN	RDS Alarm-SLS
12	I	CSD	Code Select
13	I	SCPRX	Serial data µC Interface
14	I	SCPTX	Serial Daten µC Interface
15	I	SCPCK	Clock µC Interface
16	I	SCDIO	Plusuprising Digital Ein/Ausgänge
17	-	VSSD	Masse Digitale Ein-/Ausgänge
18	I	CXAU	28.5 MHz Oszilator
20	I	XTAL0	Teststreuung 1
21	O	XTAL0	28.5 MHz Oszilator
31	I	TD11	Oscillator 28.5 MHz
32	-	VDD	Test Input 1
35	-	VSSPL	Massa
36	-	VSSPL	(Minus) PLL
37	O	REFP1	PLL-A/D-Wandler Positive Reference
38	O	REFN1	PLL-A/D-Wandler Negative Reference
39	-	CAP1	PLL-Kapazität (positiv)
40	O	VDDP	PLL capacity (+) 5 V
41	O	VSSD	PLL capacity (-) 5 V
44	O	RFO	Audio Rechts (parallel)
46	-	LFO	Audio Links (parallel)
48	-	VDDA	SV A/D - Wandler
49	O	REFP2	SV A/D - Wandler Positive Reference
50	O	REFN2	SV A/D - Wandler Negative Reference
51	O	REFP3	EXC Eingangs Links
52	I	UCL	Cassette Eingangs
54	-	AGND	Excassette Eingabe
55	I	CCR	Cassette Eingabe rechts
56	I	UCL	Excassette Eingabe
57	-	VDDR	SV Massa
58	O	REFP2	Audio D/A-Wandler Positive Reference
59	O	REFN2	Audio D/A-Wandler Negative Reference
60	I	IFP	Positif IF Input
61	I	REFN2	ZF Eingang (plus)
62	O	REFP2	ZF Eingang (minus)
63	-	VSSD	IF A/D-converter (-)
64	-	VDDP	IF A/D-converter (+) 5 V

CC 481

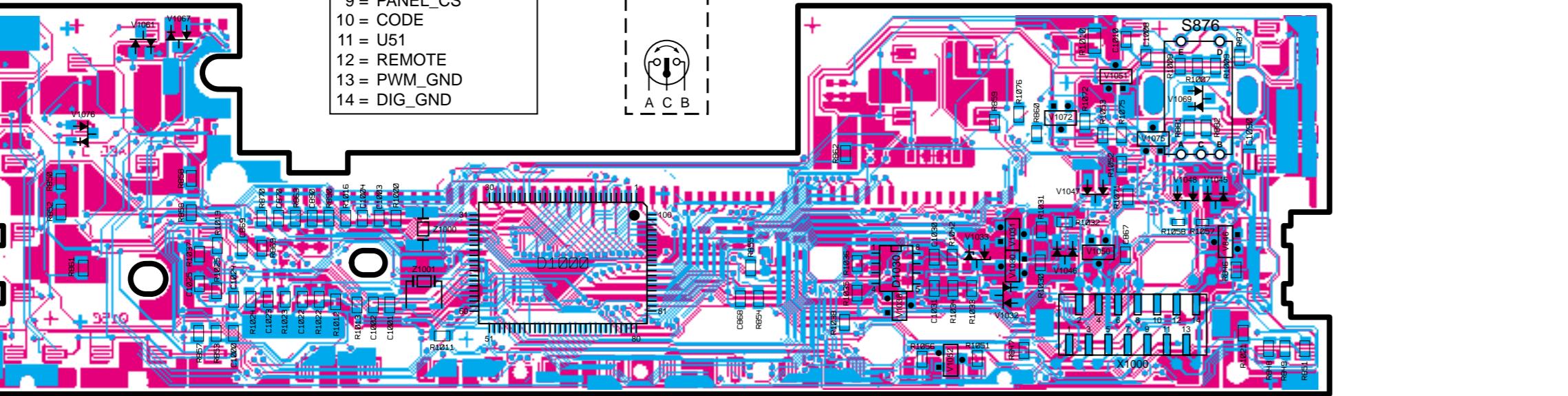




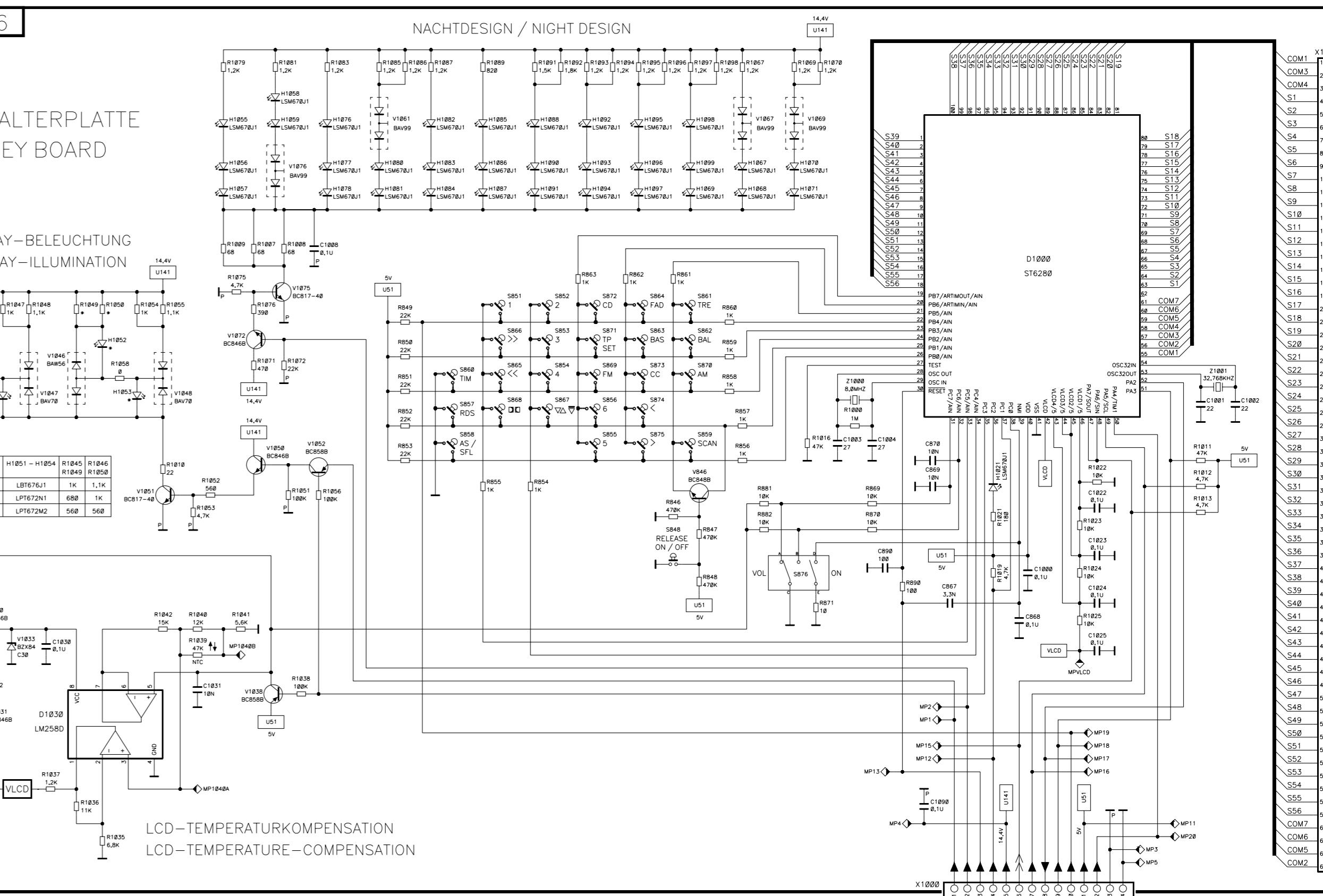
Schalterplatte  
Key board  
PL 0150 A06  
Chip



Schalterplatte  
Key board  
PL 0150 A06  
+ Chip



X1000	
1	= DISPLAY_PWM
2	= NACHTD_PWM
3	= RESET
4	= PANEL_REQUEST
5	= U141
6	= PANEL_DATA
7	= PANEL_CLK
8	= WATCH_RESET
9	= PANEL_CS
10	= CODE
11	= U51
12	= REMOTE
13	= PWM_GND
14	= DIG_GND



Hauptplatte  
Main board  
PL 0149 A04



A100  
(TO X2 / X3)

1 = MP\_ANT  
2 = N.C.  
3 = GND  
4 = + PHANTOM  
5 = U\_FM  
6 = GND  
7 = U\_PLL  
8 = MP\_dU  
9 = CF400 / CS  
10 = SPL\_2\_SIMO  
11 = SPI\_2\_CLK  
12 = SPI\_2\_SOMI  
13 = F\_REF  
14 = U85  
15 = GND  
16 = IF-  
17 = IF+  
18 = U\_AM  
19 = N.C.

X2001

1 = CDC\_NF\_L  
2 = CDC\_NF\_GND  
3 = CDC\_NF\_R  
4 = TEL\_NF+  
5 = TEL\_NF-  
6 = LINE\_OUT\_GND

X2003

1 = LINE\_OUT\_RF  
2 = LINE\_OUT\_RR  
3 = LINE\_OUT\_LF  
4 = LINE\_OUT\_LR

X1100

1 = REF  
2 = L ▼  
3 = R ▼  
4 = R ▲  
5 = L ▲

1 2 3 4 5 6 7 8 9 11 13 15 17 19 20 22 18 14 10 6 2 26 24 21 17 16 18 5 1

3 4

1

2

3

4

X2000

1 = GND (KL\_31)  
2 = CDC\_DATA\_IN  
3 = UB (KL\_30)  
4 = CDC\_CLOCK  
5 = CDC\_SWITCH  
6 = CDC\_DATA\_OUT  
7 = SPEAKER\_LR+  
8 = N.C.  
9 = SPEAKER\_LR-  
10 = REMOTE  
11 = SPEAKER\_LF+  
12 = ILLUMINATION  
13 = SPEAKER\_LF-  
14 = K\_BUS  
15 = KL\_30\_CODE  
16 = S\_KONTAKT  
17 = SPEAKER\_RF-  
18 = GALA  
19 = SPEAKER\_RF+  
20 = TEL\_MUTE  
21 = SPEAKER\_RR-  
22 = DISPLAY\_CLOCK  
23 = SPEAKER\_RR+  
24 = DISPLAY\_DATA  
25 = SWITCH\_SOUND\_S  
26 = DISPLAY\_ENA

X1300  
(TO X1201)

1 = CRST  
2 = +5V  
3 = CRQ  
4 = SDA  
5 = SCL  
6 = +14V  
7 = GND  
8 = CC\_SW\_PLAY

X1000

1 = DISPLAY\_PWM  
2 = NACHTD\_PWM  
3 = RESET  
4 = PANEL\_REQUEST  
5 = U141  
6 = PANEL\_DATA  
7 = PANEL\_CLK  
8 = WATCH\_RESET  
9 = PANEL\_CS  
10 = CODE  
11 = U51  
12 = REMOTE  
13 = GND  
14 = GND

Hauptplatte  
Main board  
PL 0149 A04



1 2 3 4 1

2

3

4

X2000

BC848

BC848

BC858

BC858

BC807

V2010

V2011

V2012

V2013

V2014

V2015

V2016

V2017

V892

V893

V890

V1620

V2025

V2013

V2014

V2018

V2019

V2000

V2021

V2022

V2023

V2024

V2025

V2026

FMMT493

V2085

C

B

E

D

A

Z

Y

X

W

V

U

T

S

R

P

O

N

M

A100

1 = MP\_ANT  
2 = N.C.  
3 = GND  
4 = + PHANTOM  
5 = U\_FM  
6 = GND  
7 = U\_PLL  
8 = MP\_dU  
9 = CF400 / CS  
10 = SPL\_2\_SIMO  
11 = SPI\_2\_CLK  
12 = SPI\_2\_SOMI  
13 = F\_REF  
14 = U85  
15 = GND  
16 = IF-  
17 = IF+  
18 = U\_AM  
19 = N.C.

X2001

1 = CDC\_NF\_L  
2 = CDC\_NF\_GND  
3 = CDC\_NF\_R  
4 = TEL\_NF+  
5 = TEL\_NF-  
6 = LINE\_OUT\_GND

X2003

1 = LINE\_OUT\_RF  
2 = LINE\_OUT\_RR  
3 = LINE\_OUT\_LF  
4 = LINE\_OUT\_LR

X1100

1 = REF  
2 = L ▼  
3 = R ▼  
4 = R ▲  
5 = L ▲

1 2 3 4 5 6 7 8 9 11 13 15 17 19 20 22 18 14 10 6 2 26 24 21 17 16 18 5 1

3 4

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2

3

4

X2000

1 = GND (KL\_31)  
2 = CDC\_DATA\_IN  
3 = UB (KL\_30)  
4 = CDC\_CLOCK  
5 = CDC\_SWITCH  
6 = CDC\_DATA\_OUT  
7 = SPEAKER\_LR+  
8 = N.C.  
9 = SPEAKER\_LR-  
10 = REMOTE  
11 = SPEAKER\_LF+  
12 = ILLUMINATION  
13 = SPEAKER\_LF-  
14 = K\_BUS  
15 = KL\_30\_CODE  
16 = S\_KONTAKT  
17 = SPEAKER\_RF-  
18 = GALA  
19 = SPEAKER\_RF+  
20 = TEL\_MUTE  
21 = SPEAKER\_RR-  
22 = DISPLAY\_CLOCK  
23 = SPEAKER\_RR+  
24 = DISPLAY\_DATA  
25 = SWITCH\_SOUND\_S  
26 = DISPLAY\_ENA

X1300

1 = CRST  
2 = +5V  
3 = CRQ  
4 = SDA  
5 = SCL  
6 = +14V  
7 = GND  
8 = CC\_SW\_PLAY

X1000

1 = DISPLAY\_PWM  
2 = NACHTD\_PWM  
3 = RESET  
4 = PANEL\_REQUEST  
5 = U141  
6 = PANEL\_DATA  
7 = PANEL\_CLK  
8 = WATCH\_RESET  
9 = PANEL\_CS  
10 = CODE  
11 = U51  
12 = REMOTE  
13 = GND  
14 = GND

A100

1 = MP\_ANT  
2 = N.C.  
3 = GND  
4 = + PHANTOM  
5 = U\_FM  
6 = GND  
7 = U\_PLL  
8 = MP\_dU  
9 = CF400 / CS  
10 = SPL\_2\_SIMO  
11 = SPI\_2\_CLK  
12 = SPI\_2\_SOMI  
13 = F\_REF  
14 = U85  
15 = GND  
16 = IF-  
17 = IF+  
18 = U\_AM  
19 = N.C.

X2001

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2 = CDC\_NF\_GND  
3 = CDC\_NF\_R  
4 = TEL\_NF+  
5 = TEL\_NF-  
6 = LINE\_OUT\_GND

X2003

1 = LINE\_OUT\_RF  
2 = LINE\_OUT\_RR  
3 = LINE\_OUT\_LF  
4 = LINE\_OUT\_LR

X1100

1 = REF  
2 = L ▼  
3 = R ▼  
4 = R ▲  
5 = L ▲

1 2 3 4 5 6 7 8 9 11 13 15 17 19 20 22 18 14 10 6 2 26 24 21 17 16 18 5 1

3 4

1

2

3

4

X2000

1 = GND (KL\_31)  
2 = CDC\_DATA\_IN  
3 = UB (KL\_30)  
4 = CDC\_CLOCK  
5 = CDC\_SWITCH  
6 = CDC\_DATA\_OUT  
7 = SPEAKER\_LR+  
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13 = SPEAKER\_LF-  
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15 = KL\_30\_CODE  
16 = S\_KONTAKT  
17 = SPEAKER\_RF-  
18 = GALA  
19 = SPEAKER\_RF+  
20 = TEL\_MUTE  
21 = SPEAKER\_RR-  
22 = DISPLAY\_CLOCK  
23 = SPEAKER\_RR+  
24 = DISPLAY\_DATA  
25 = SWITCH\_SOUND\_S  
26 = DISPLAY\_ENA

X1300

1 = CRST  
2 = +5V  
3 = CRQ  
4 = SDA  
5 = SCL  
6 = +14V  
7 = GND  
8 = CC\_SW\_PLAY

X1000

1 = DISPLAY\_PWM  
2 = NACHTD\_PWM  
3 = RESET  
4 = PANEL\_REQUEST  
5 = U141  
6 = PANEL\_DATA  
7 = PANEL\_CLK  
8 = WATCH\_RESET  
9 = PANEL\_CS  
10 = CODE  
11 = U51  
12 = REMOTE  
13 = GND  
14 = GND

A100

1 = MP\_ANT  
2 = N.C.  
3 = GND  
4 = + PHANTOM  
5 = U\_FM  
6 = GND  
7 = U\_PLL  
8 = MP\_dU  
9 = CF400 / CS  
10 = SPL\_2\_SIMO  
11 = SPI\_2\_CLK  
12 = SPI\_2\_SOMI  
13 = F\_REF  
14 = U85  
15 = GND  
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19 = N.C.

X2001

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5 = TEL\_NF-  
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X2003

1 = LINE\_OUT\_RF  
2 = LINE\_OUT\_RR  
3 = LINE\_OUT\_LF  
4 = LINE\_OUT\_LR

X1100

1 = REF  
2 = L ▼  
3 = R ▼  
4 = R ▲  
5 = L ▲

1 2 3 4 5 6 7 8 9 11 13 15 17 19 20 22 18 14 10 6 2 26 24 21 17 16 18 5 1

3 4

1

2

3

4

X2000

1 = GND (KL\_31)  
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3 = UB (KL\_30)  
4 = CDC\_CLOCK  
5 = CDC\_SWITCH  
6 = CDC\_DATA\_OUT  
7 = SPEAKER\_LR+  
8 = N.C.  
9 = SPEAKER\_LR-  
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15 = KL\_30\_CODE  
16 = S\_KONTAKT  
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20 = TEL\_MUTE  
21 = SPEAKER\_RR-  
22 = DISPLAY\_CLOCK  
23 = SPEAKER\_RR+  
24 = DISPLAY\_DATA  
25 = SWITCH\_SOUND\_S  
26 = DISPLAY\_ENA

X1300

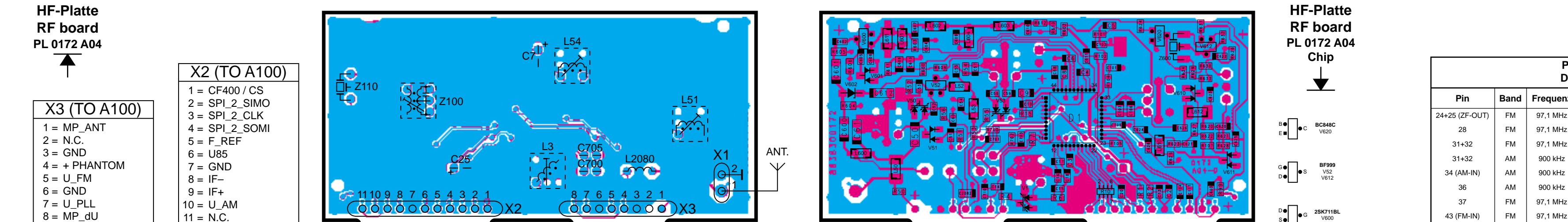
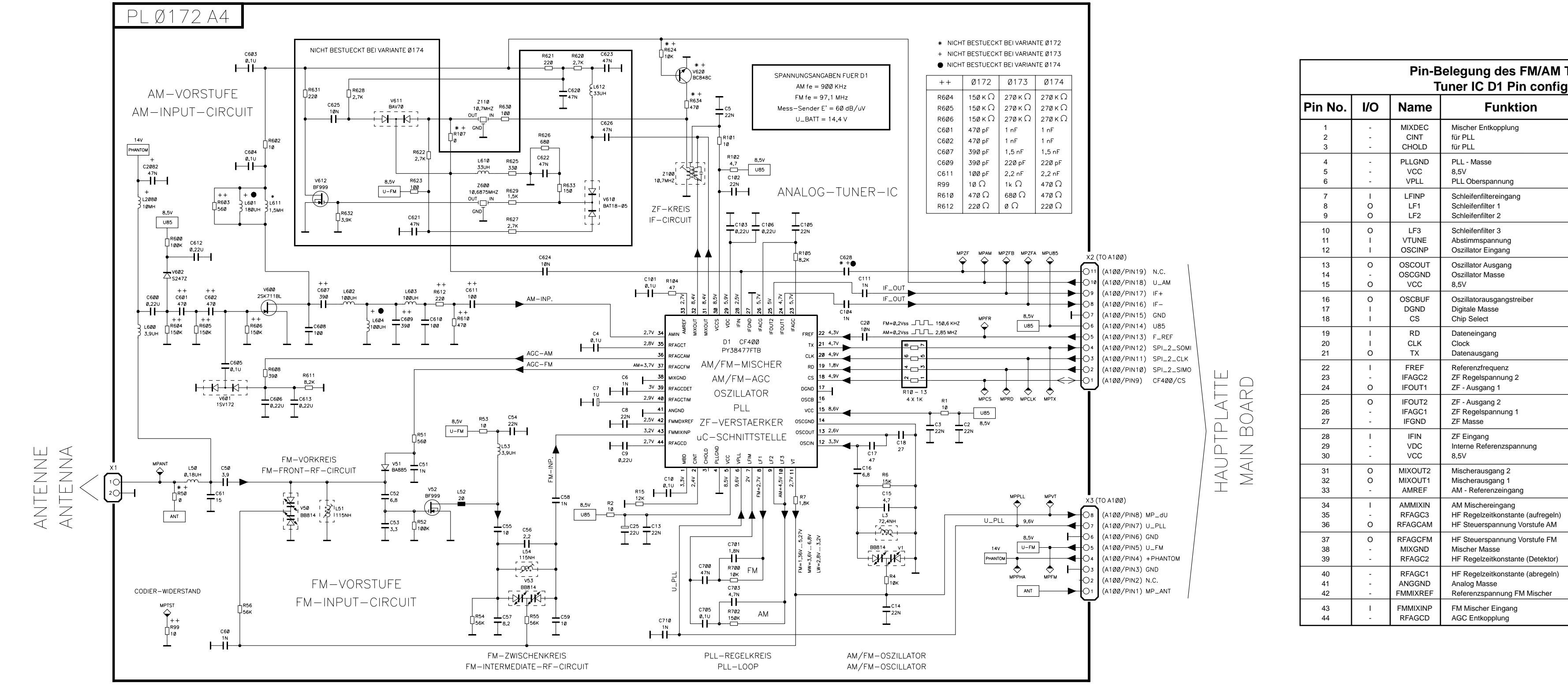
1 = CRST  
2 = +5V  
3 = CRQ  
4 = SDA  
5 = SCL  
6 = +14V  
7 = GND  
8 = CC\_SW\_PLAY

X1000

1 = DISPLAY\_PWM  
2 = NACHTD\_PWM  
3 = RESET  
4 = PANEL\_REQUEST  
5 = U141  
6 = PANEL\_DATA  
7 = PANEL\_CLK  
8 = WATCH\_RESET  
9 = PANEL\_CS  
10 = CODE  
11 = U51  
12 = REMOTE  
13 = GND  
14 = GND

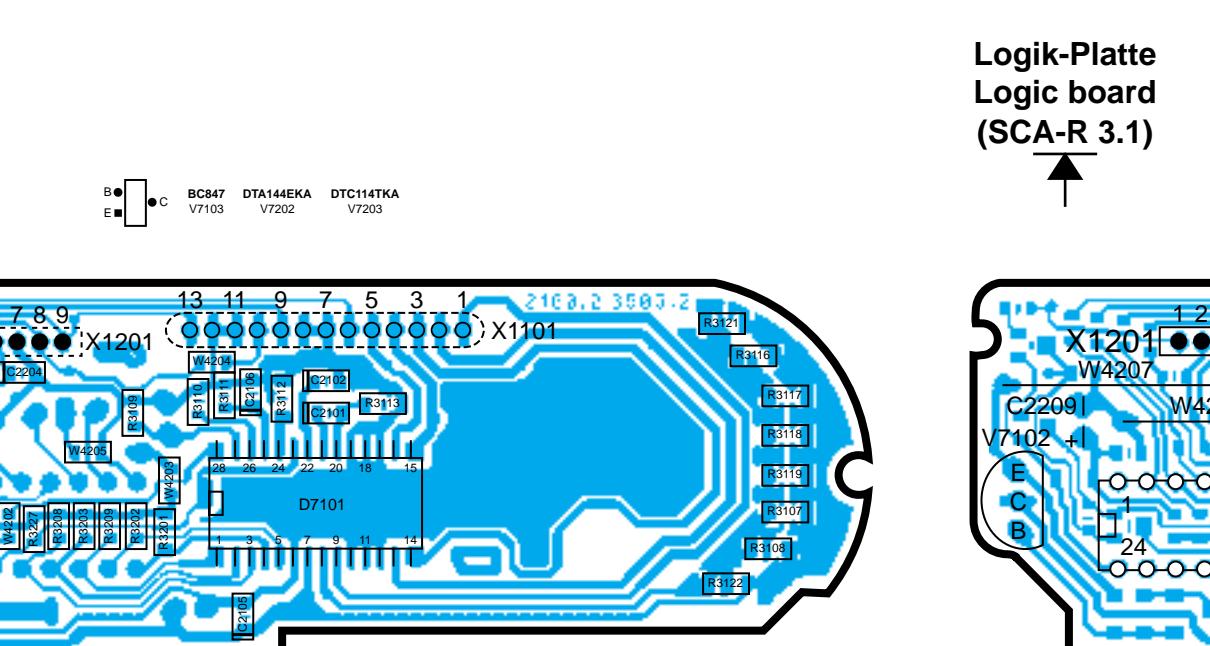
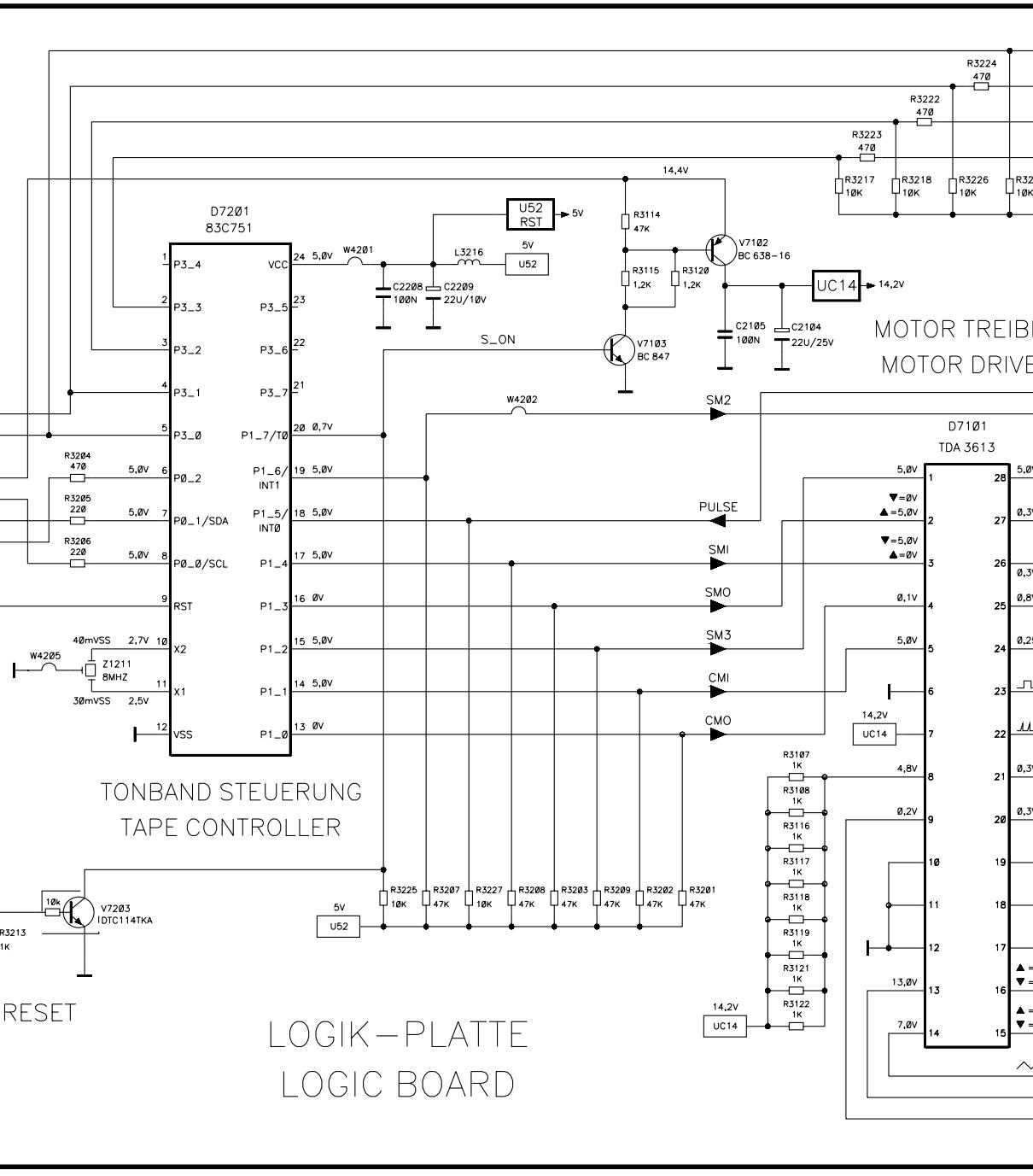
A100

1 = MP\_ANT  
2 = N.C.  
3 = GND  
4 = + PHANTOM  
5 = U\_FM  
6 = GND  
7 =

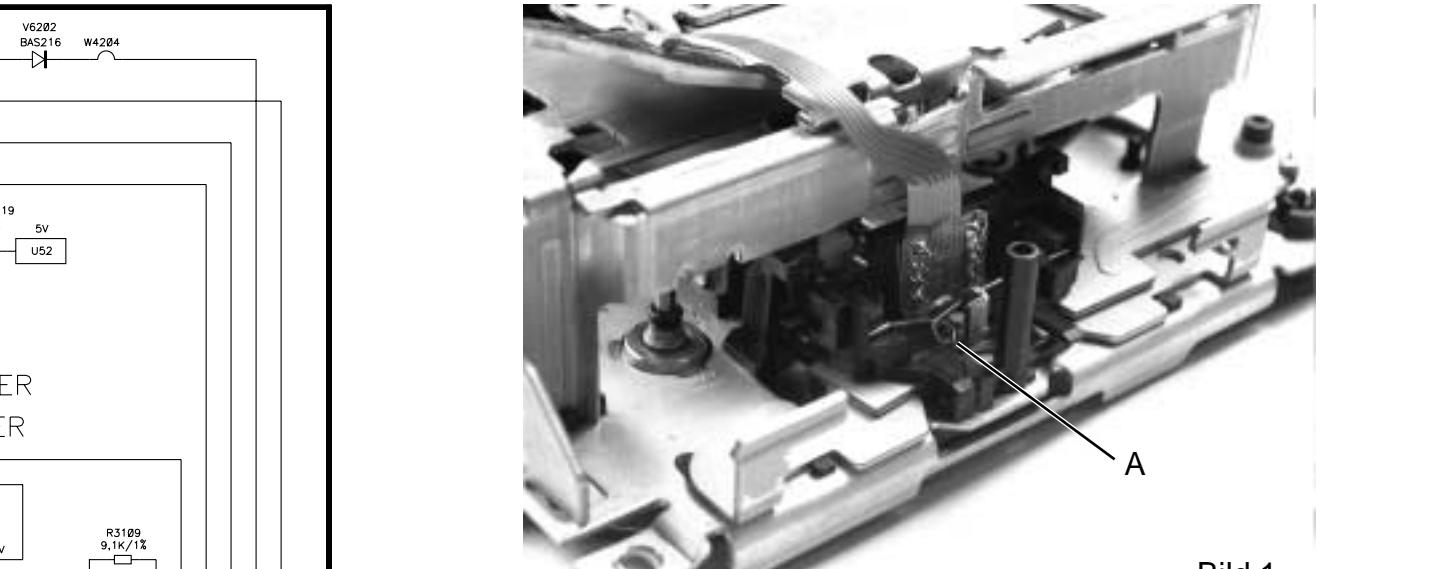


Tuner-IC D1 Configuration	
	Function
	Mixer decoupling for PLL for PLL
	PLL Ground 8,5V PLL top voltage
	PLL loop filter Input PLL loop filter Output 1 PLL loop filter Output 2
	PLL loop filter Output 3 Tuning voltage Oscillator Input
	Oscillator Output Oscillator Ground 8,5V
	Oscillator Buffer Output Digital Ground Chip Select
	DATA IN Clock DATA OUT
	Reference frequency IF AGC 2 IF output 1
	IF output 2 IF AGC 1 IF Ground
	IF Input Internal reference voltage 8,5V
	Mixer Output 2 Mixer Output 1 AM reference Input
	AM Mixer Input RF AGC 3 RF AGC for AM input stage
	RF AGC for FM input stage Mixer Ground RF AGC 2
	RF AGC 1 Analog ground Reference voltage FM mixer
	FM mixer input AGC decoupling

SCA-R 3.1



X1101	
1 = CAPSTAN_MOTOR -	8 = SW_PLAY_GND
2 = CAPSTAN_MOTOR +	9 = SW_PLAY
3 = CAPSTAN_MOTOR	10 = SW_INSERT
4 = LIFT_MOTOR -	11 = SW_INSERT_GND
5 = LIFT_MOTOR +	12 = SW_ME / CR_GND
6 = SW_STANDBY	13 = SW_ME / CR
7 = SW_STANDBY_GND	



## Bild 1 Figure 1